

Re: Product Calculation in an Access Query

Source:

<http://www.tech-archive.net/Archive/Access/microsoft.public.access.queries/2007-10/msg01624.html>

- *From:* "John Spencer" <spencer@xxxxxxxxxx>
 - *Date:* Mon, 29 Oct 2007 14:44:00 -0400
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I have this note in my things to look at pile. I don't know if it will work for you or not.

Per Brian Camire

If "value" contains only positive numbers(no nulls, no negatives, no zero value), try:

`Exp(Sum(Log([t2.value])))`

Otherwise, try using the following expression:

`IIf(Sum(IIf([Your Field]<0,1,0)) Mod 2=1,-1,1) * Sgn(Min(Abs([YourField]))) * Exp(Sum(Log(Abs(IIf([YourField]=0,1,[YourField])))))`

For reference:

1. The expression "IIf(Sum(IIf([Your Field]<0,1,0)) Mod 2=1,-1,1)" evaluates to -1 if there are an odd number of negative values, or 1 otherwise.
2. The expression "Sgn(Min(Abs([Your Field])))" evaluates to 0 if one of the values is zero, or 1 otherwise.
3. The expression "Exp(Sum(Log(Abs(IIf([Your Field]=0,1,[Your Field])))))" returns the product of the absolute values, substituting values of 0 with 1. Substituting values of 0 with 1 is simply a "trick" to avoid the "Invalid procedure call error". If there is a value of zero, the result of this expression doesn't matter anyway, since it will be multiplied by the result of the second expression, which will be zero.

—
John Spencer
Access MVP 2002-2005, 2007
Center for Health Program Development and Management
University of Maryland Baltimore County

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"SherryW" <SherryW@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message

Re: Product Calculation in an Access Query

news:79299AC1-4E34-4F77-8950-E0318D41620D@xxxxxxxxxxxxxxxxxxxx

Unfortunately, the values are not always positive as there are periods where negative returns have been realized.

—
SherryW

"Michel Walsh" wrote:

If the values are strictly positives, you can EXP(SUM(LOG(fieldName)))
to
get the same result as, in Excel, PRODUCT(column_range)

That comes from the mathematical fact that:

$$a^{(b+c)} == a^b * a^c$$

Vanderghast, Access MVP

"SherryW" <SherryW@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message
news:75B412C7-51F1-4FE9-B0CF-EB4236E51944@xxxxxxxxxxxxxxxxxxxx

We have a table of Index Returns for every month end starting in 1992 to current date. In access I am trying to calculate the Annual compound return for 10 yrs, 5 yrs, 3 yrs and 1 yr.

Originally this calculation was done in excel and each index would have

a worksheet sheet with all the monthly values and a column called Return.

In the column called return there is a formula as follows

=PRODUCT(I44:I163)^(1/10)-1 (for 10 yr)
=PRODUCT(I92:I163)^(1/5)-1 (for 5 yr)
=PRODUCT(I128:I163)^(1/3)-1 (for 3 yr)
=PRODUCT(I152:I163)-1 (for 1 yr)

Every year, we would redefine the 10 yr, 5 yr 3yr and 1 yr

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range to
include
the proper dates for the formulas above.

My question is: how do I do this calculation in Access?
There isn't a
product function. I have a table with all of the Monthly Index
values
since
1992 to current date. The fields are:

VLDT, Index Code, Index Name and Return. So, for the 10
yr calculation

I
can put in a date range of ie: Between #31/12/2006# and
#31/12/2006#,

I
would need to either group by Index Code OR Index Name
but here's the
kicker,
it doesn't appear that there is a product function in access.
So, any
pearls
of wisdom on how I would do this product calculation
above? I am so
stumped
here!

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SherryW